



Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: Treadmill

Test Model:P2-B

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Joker Hu
Supervised by:	Ling Zhu





B.1 DTS Bandwidth

Test Result

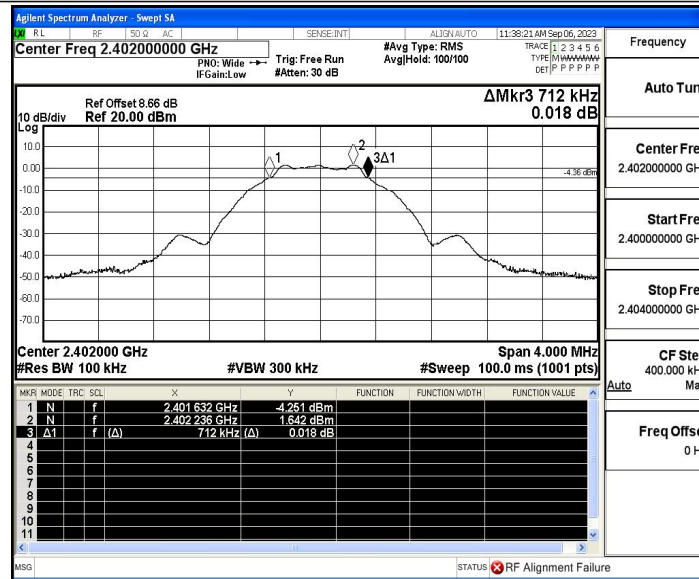
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.712	2401.632	2402.344	0.5	PASS
		2440	0.712	2439.632	2440.344	0.5	PASS
		2480	0.712	2479.632	2480.344	0.5	PASS



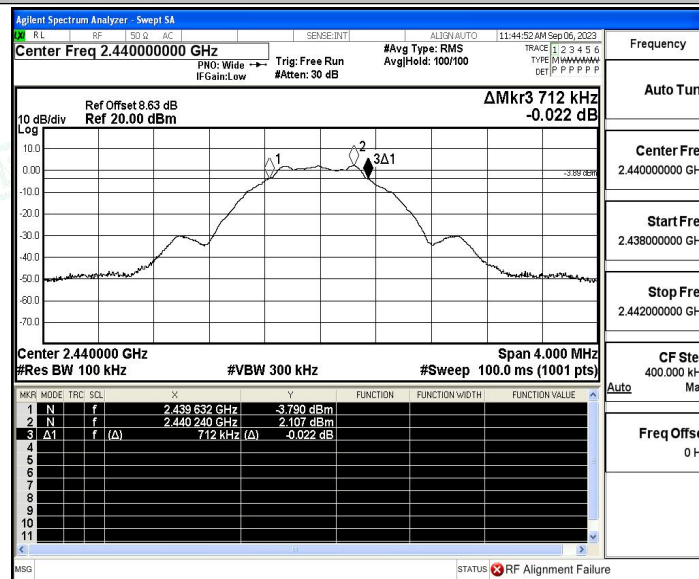


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

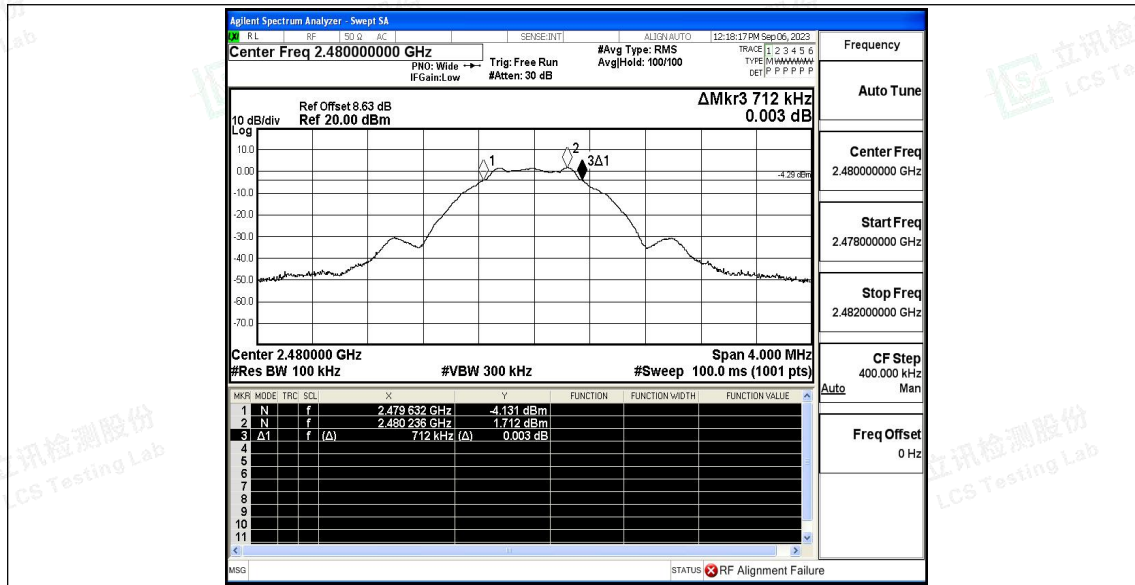


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B.2 Occupied Channel Bandwidth

Test Result

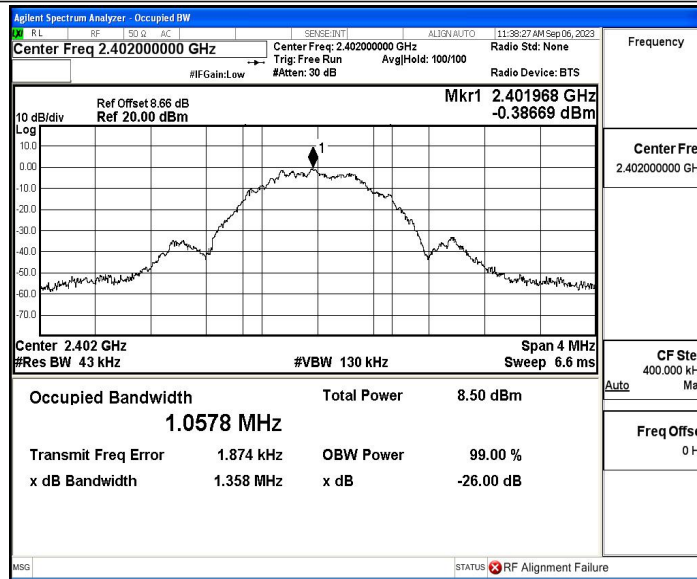
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0578	2401.4730	2402.5308	---	---
		2440	1.0643	2439.4682	2440.5325	---	---
		2480	1.0586	2479.4721	2480.5307	---	---



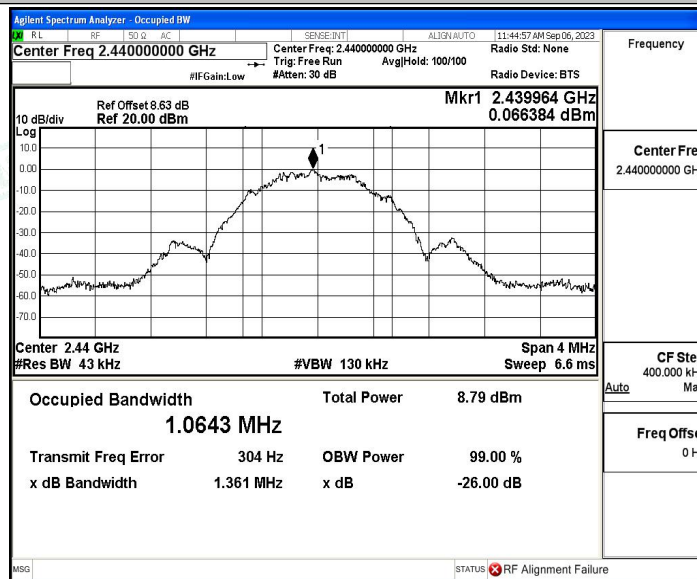


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

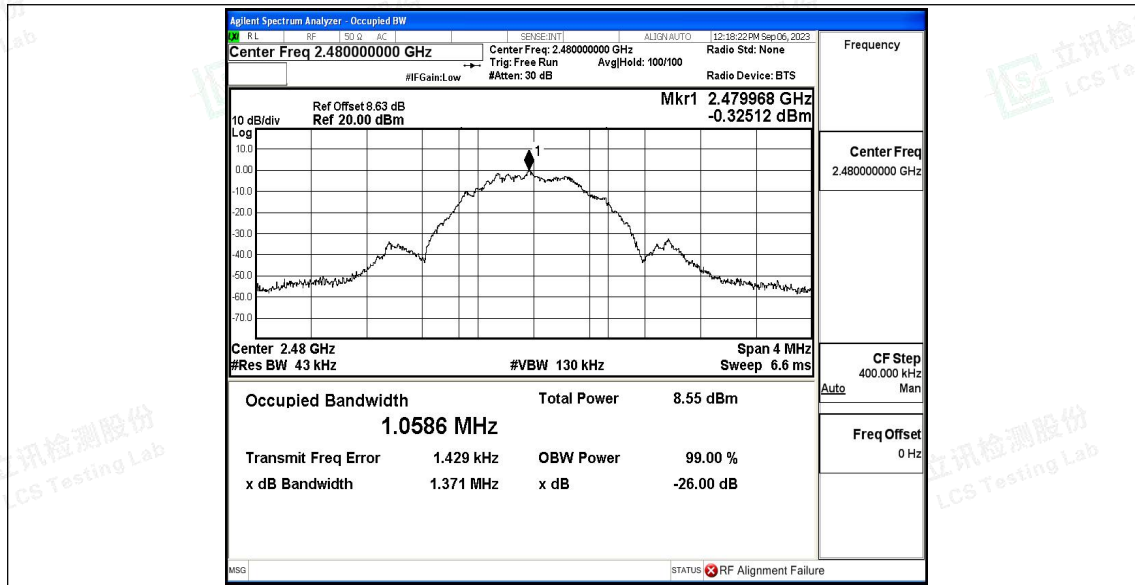


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B.3 Maximum Peak conducted output power

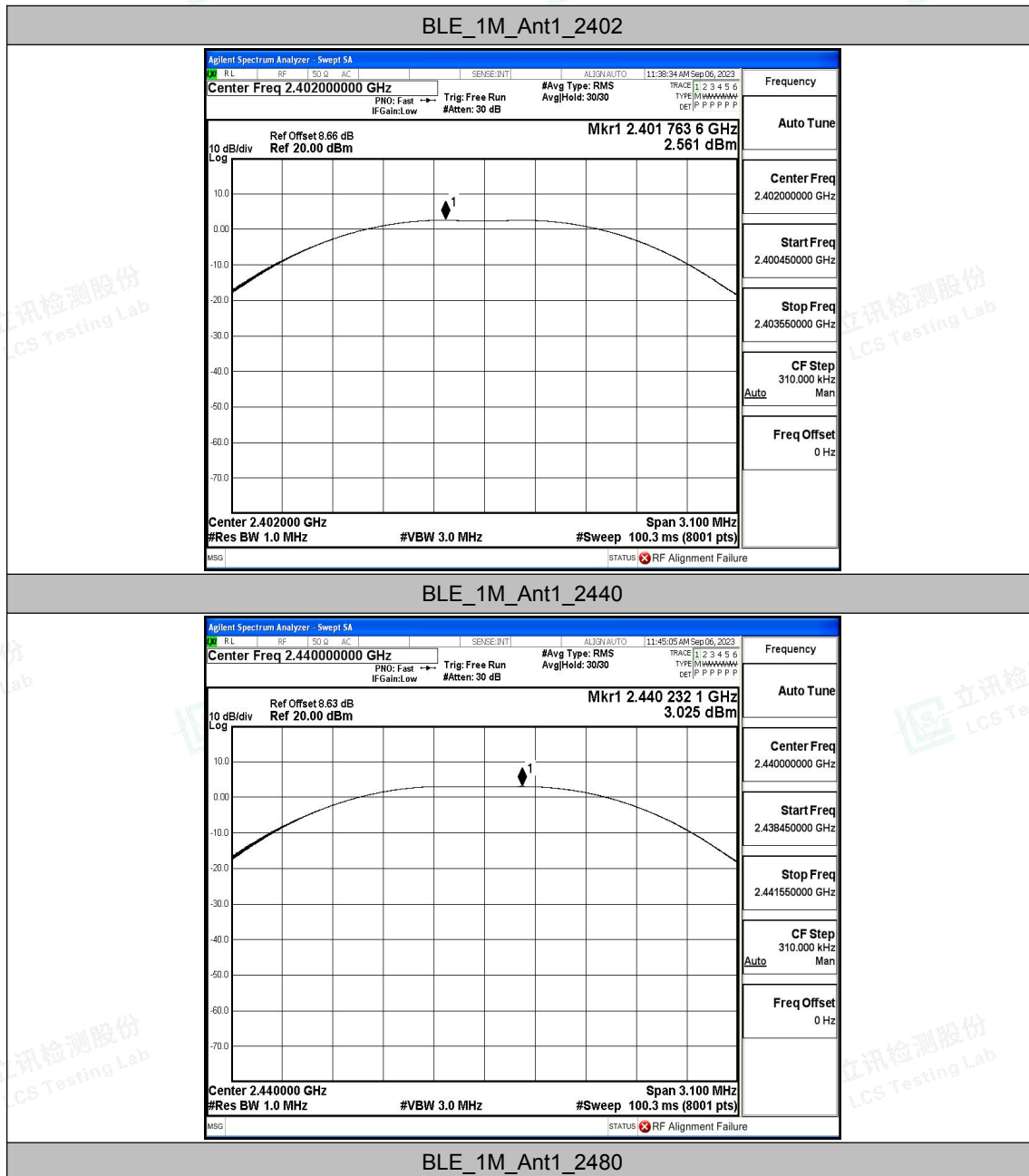
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	2.56	≤30	PASS
		2440	3.03	≤30	PASS
		2480	2.65	≤30	PASS





Test Graphs

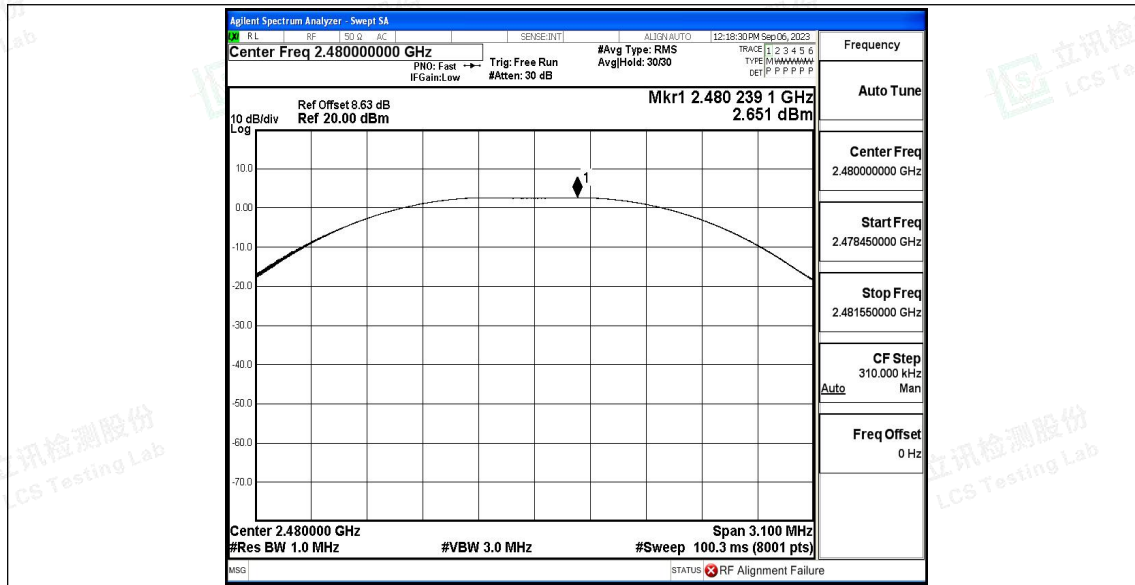


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B.4 Maximum power spectral density

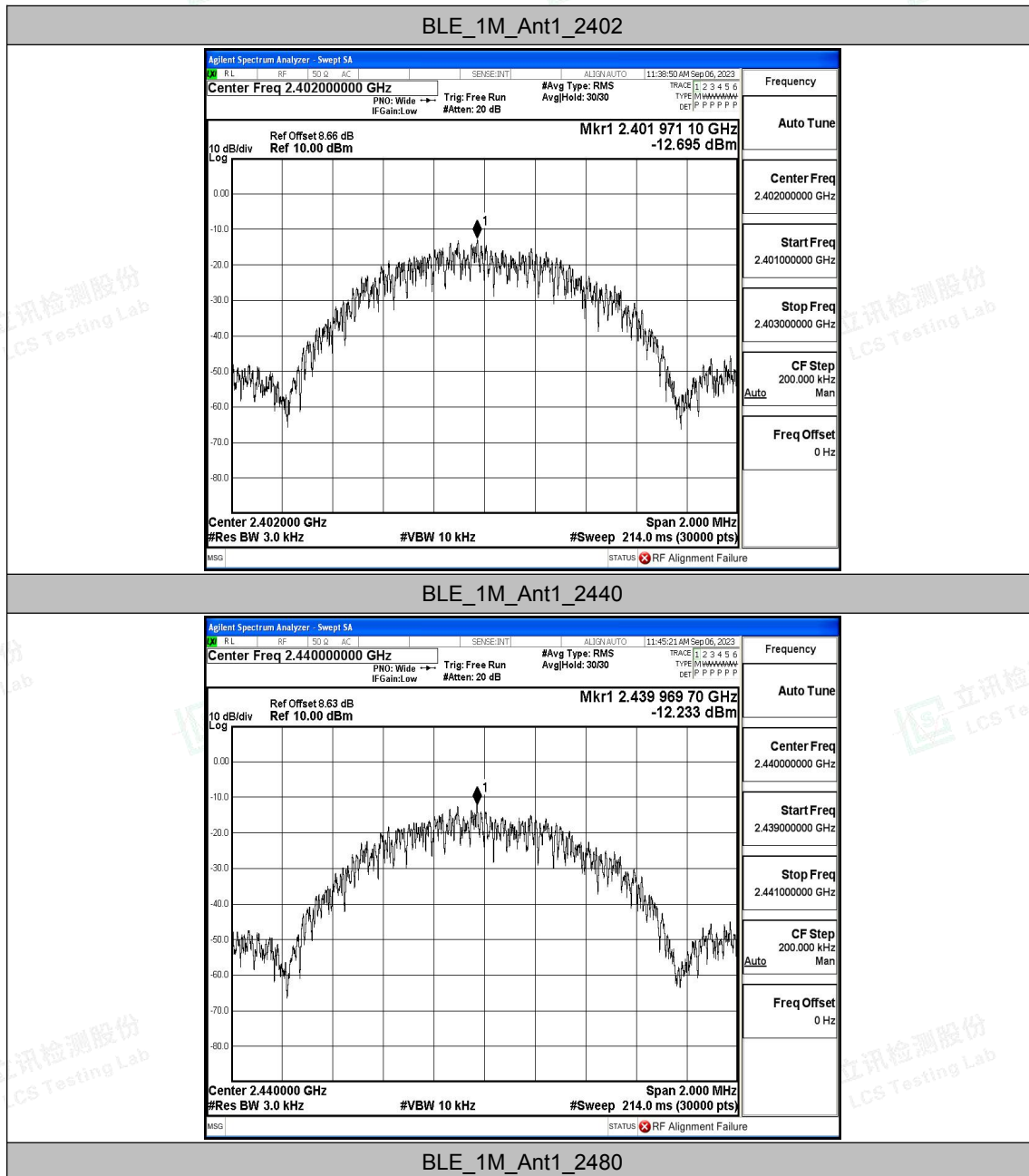
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-12.7	≤8.00	PASS
		2440	-12.23	≤8.00	PASS
		2480	-12.62	≤8.00	PASS





Test Graphs

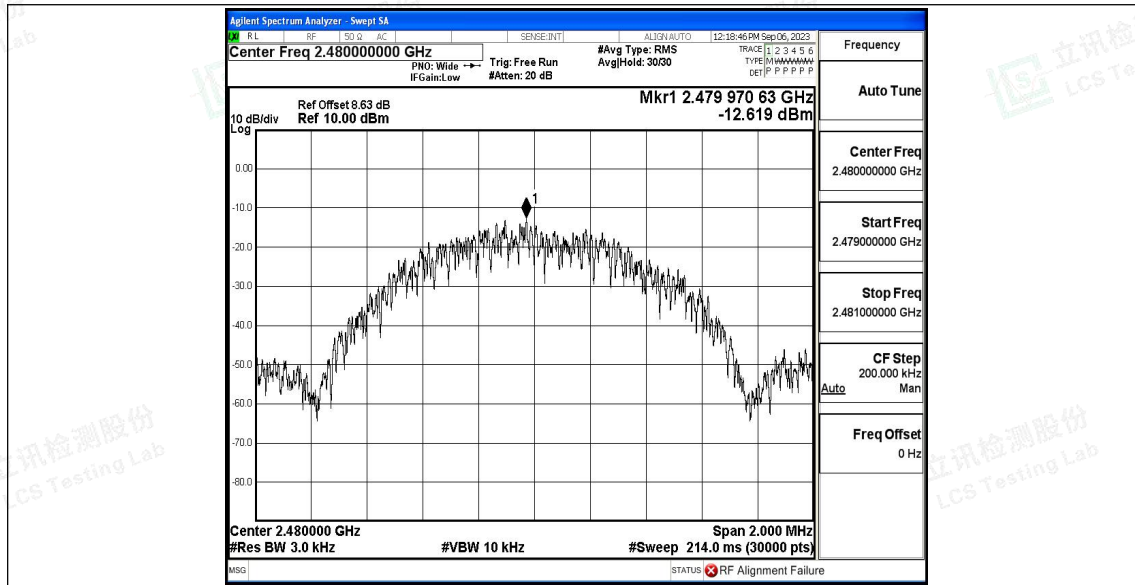


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B.5 Band edge measurements

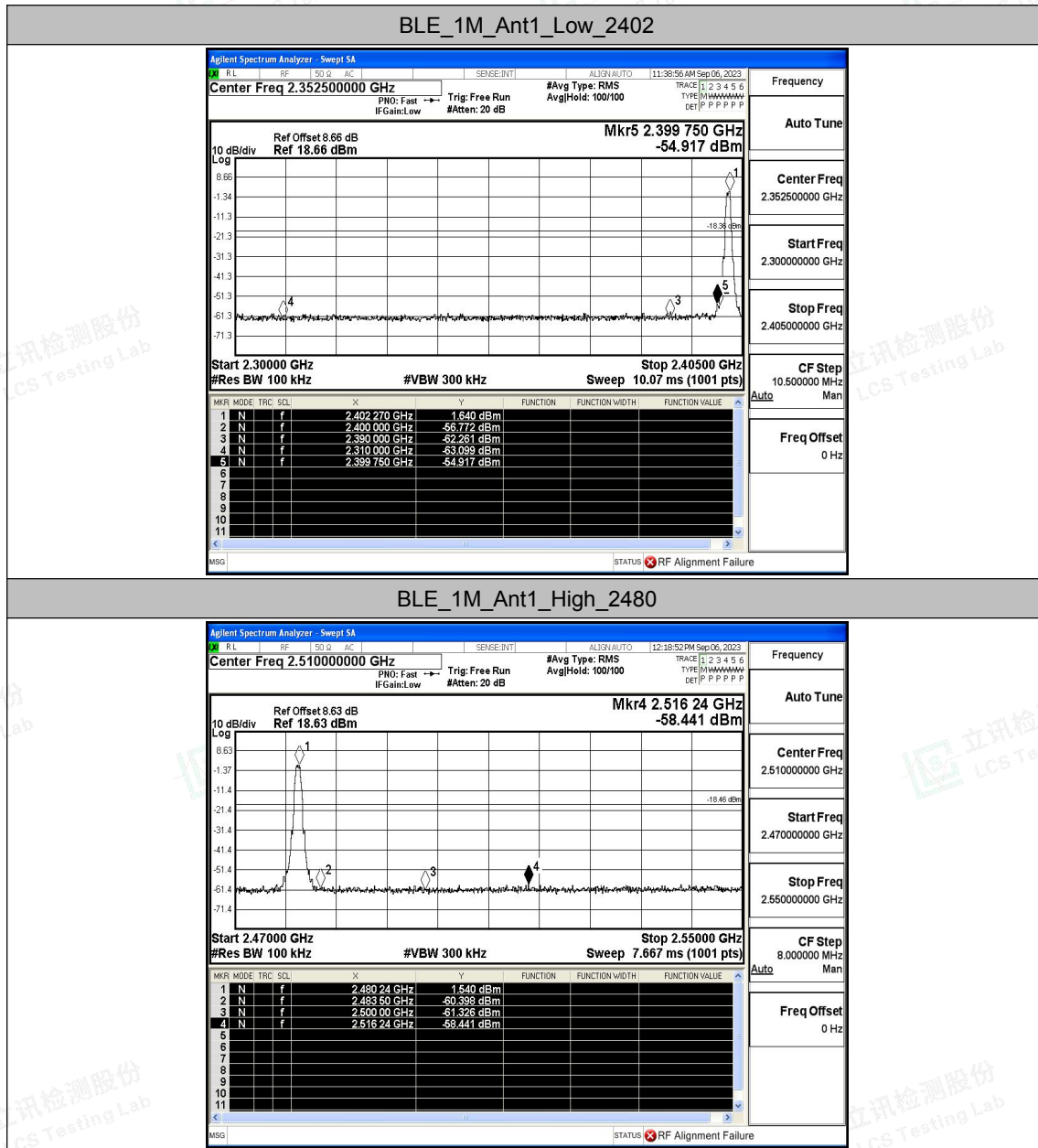
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	1.64	-54.92	≤-18.36	PASS
		High	2480	1.54	-58.44	≤-18.46	PASS





Test Graphs



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B.6 Conducted Spurious Emission

Test Result

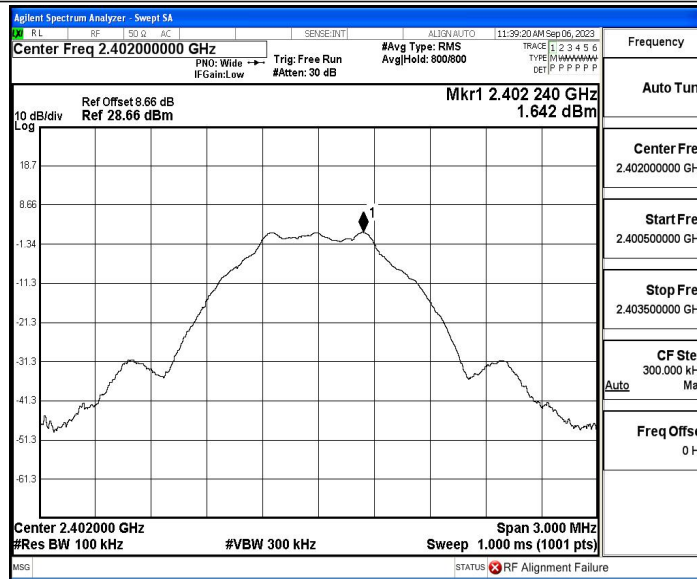
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	1.64	1.64	---	PASS
			30~1000	1.64	-60.91	≤-18.36	PASS
			1000~26500	1.64	-46.3	≤-18.36	PASS
		2440	Reference	2.12	2.12	---	PASS
			30~1000	2.12	-60.87	≤-17.88	PASS
			1000~26500	2.12	-47.08	≤-17.88	PASS
		2480	Reference	2.09	2.09	---	PASS
			30~1000	2.09	-61.24	≤-17.91	PASS
			1000~26500	2.09	-46.63	≤-17.91	PASS



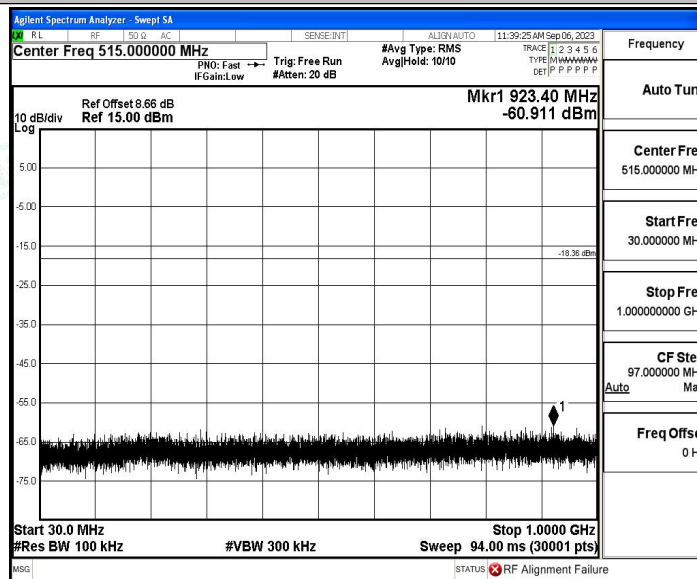


Test Graphs

BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



BLE_1M_Ant1_2402_1000~26500

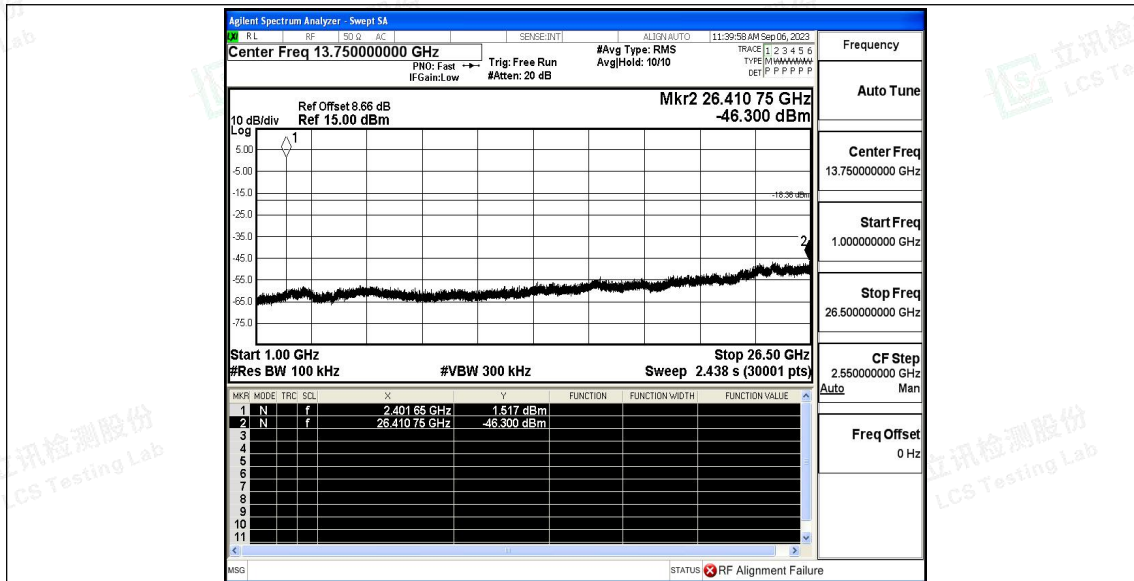


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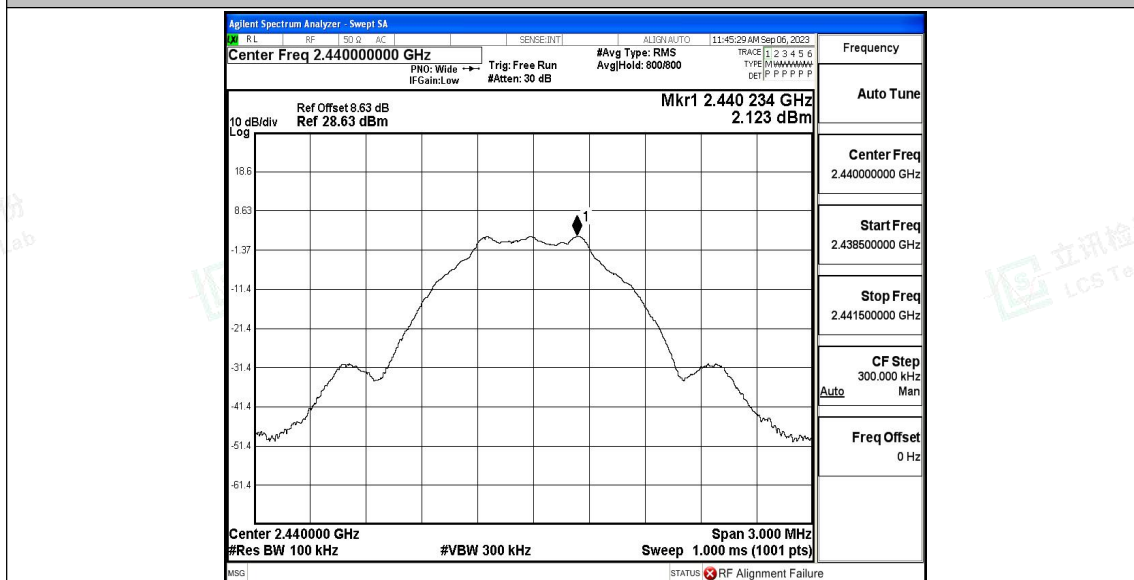
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BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

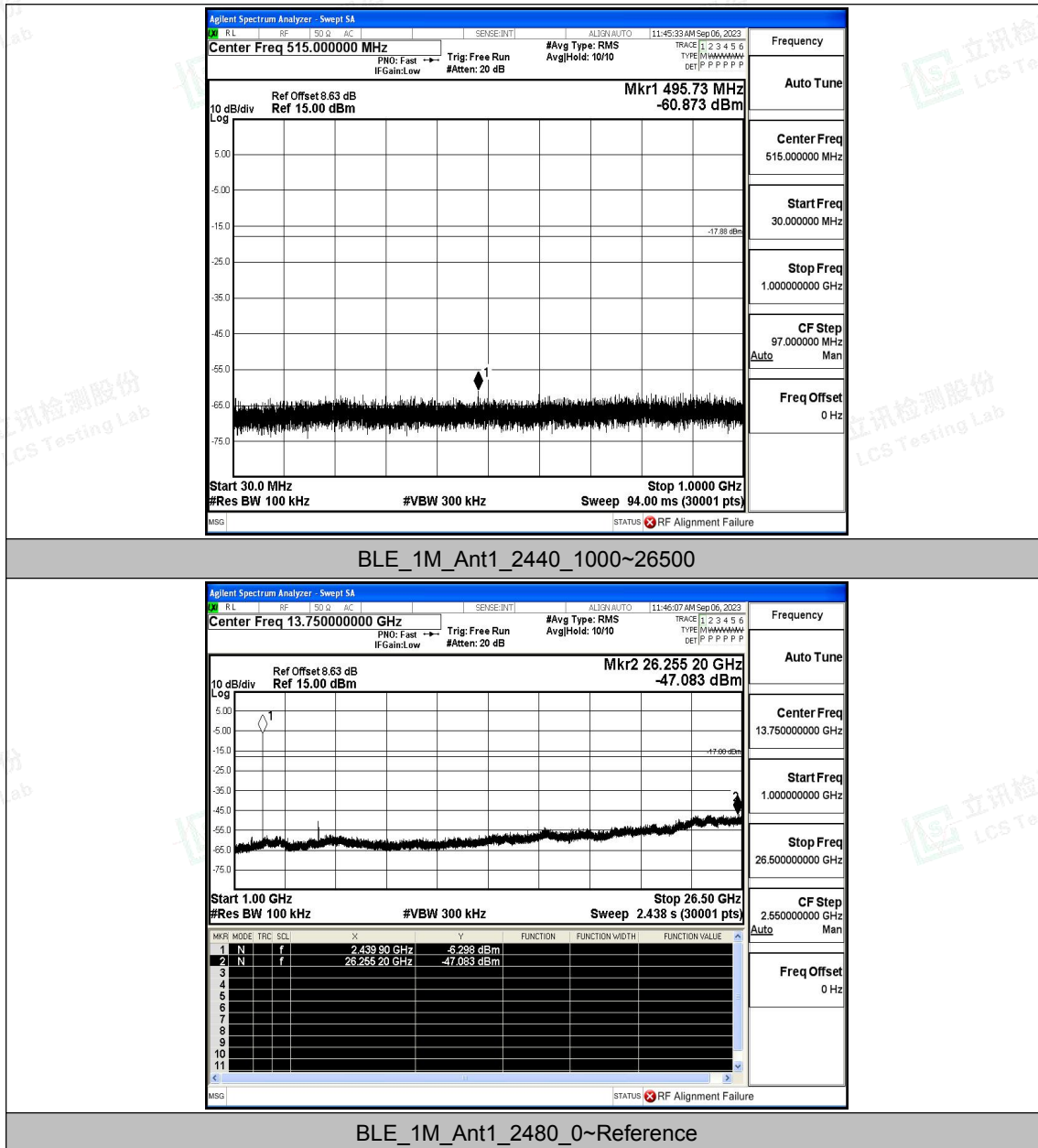


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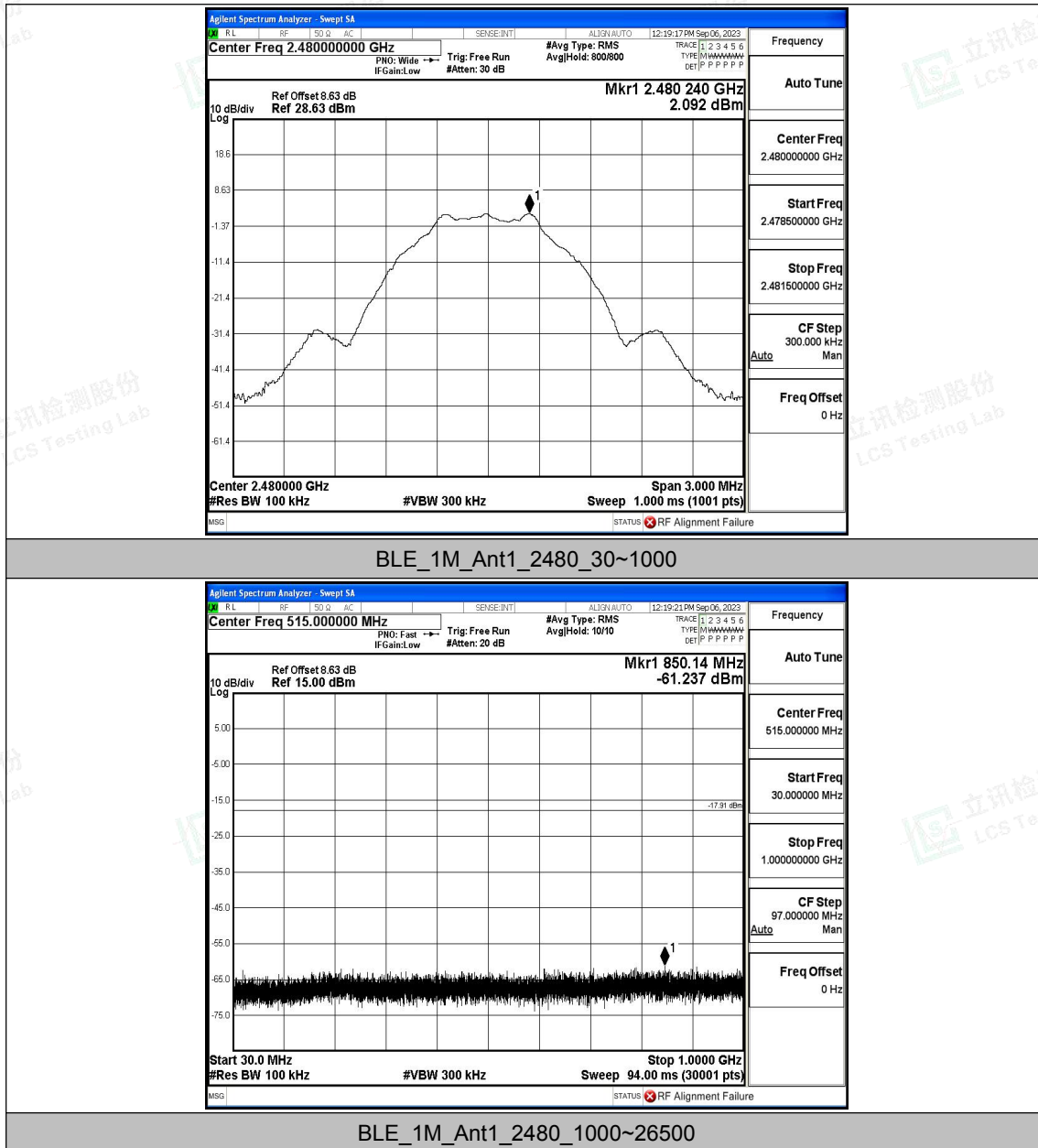


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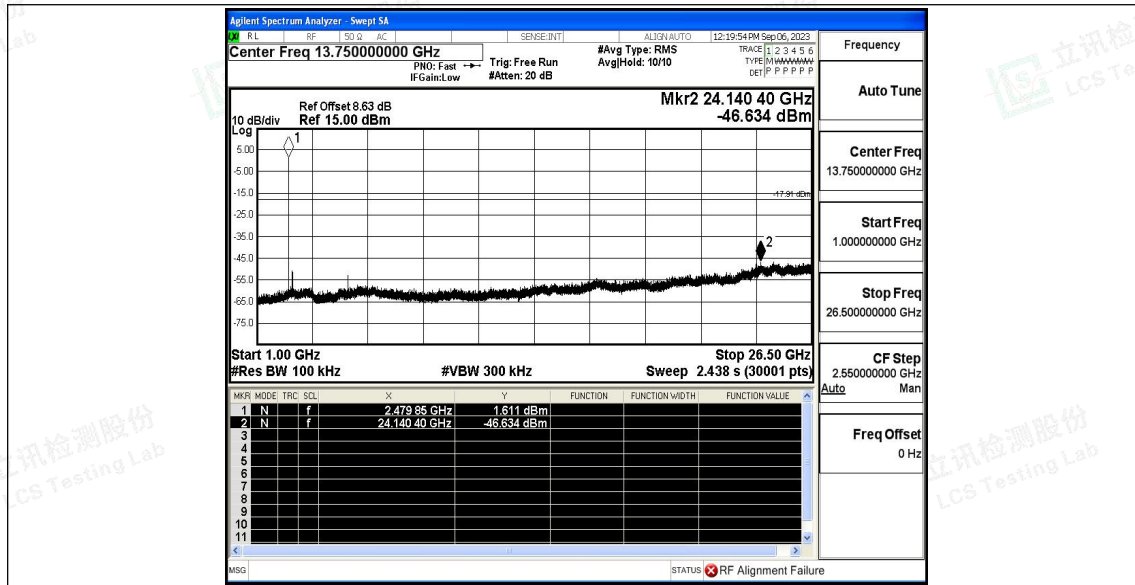


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B.7 Duty Cycle

Test Result

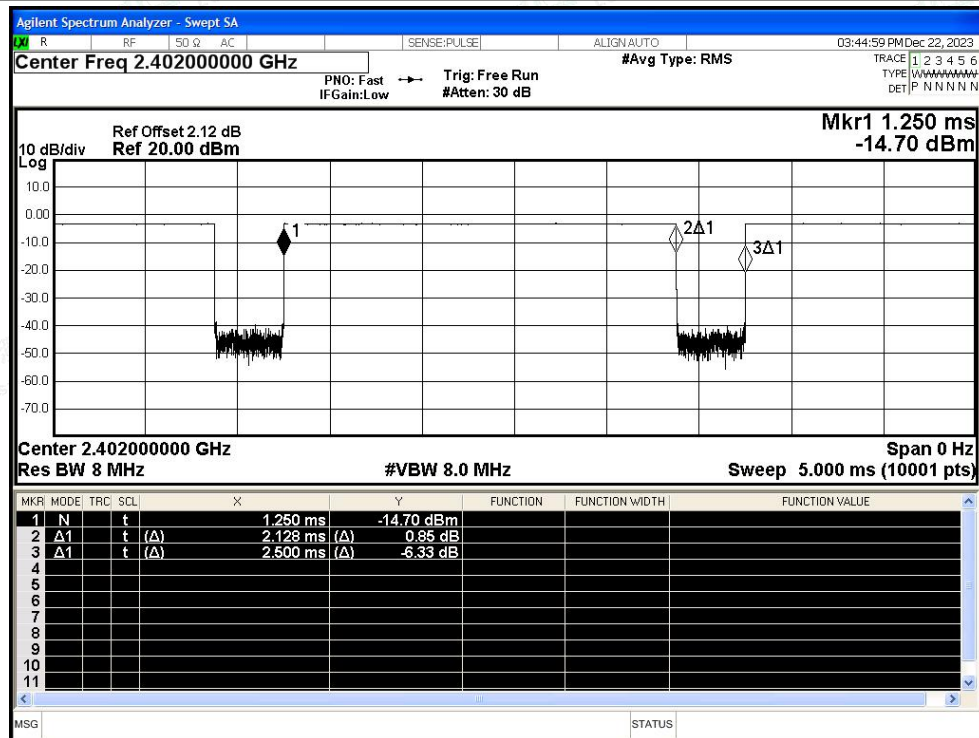
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant1	85.1	0.7	0.47
NVNT	BLE 1M	2440	Ant1	85.1	0.7	0.47
NVNT	BLE 1M	2480	Ant1	85.1	0.7	0.47



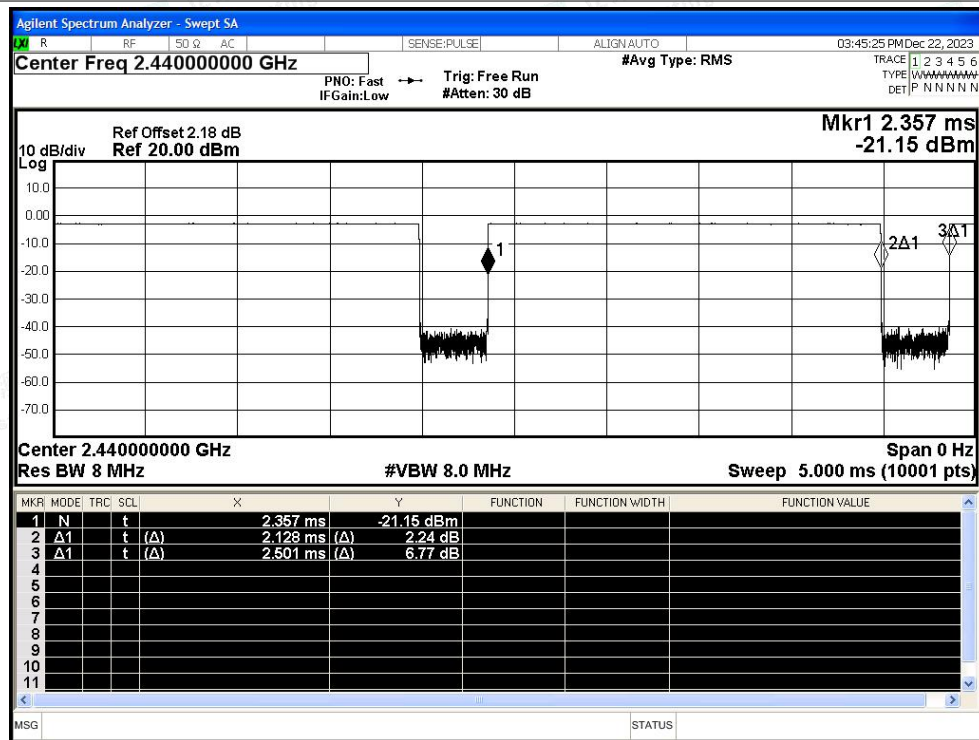


Test Graphs

Duty Cycle NVNT BLE 1M 2402MHz Ant1



Duty Cycle NVNT BLE 1M 2440MHz Ant1

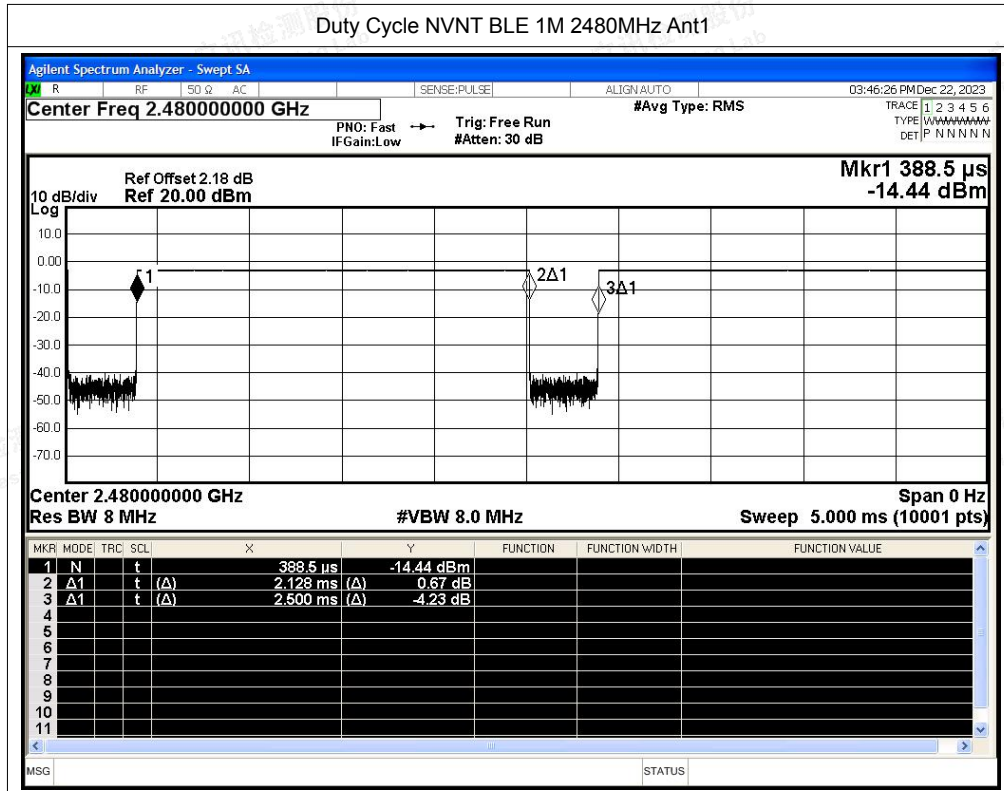


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B.8 Emissions in Restricted Bands

Test Result

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1M	2402	Ant1	2310	-50.13	2	-	47.13	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2310	-58.99	2	0.7	38.97	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2347.152	-47.53	2	-	49.73	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2384.4	-57.66	2	0.7	40.3	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2390	-49.1	2	-	48.16	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2390	-58.66	2	0.7	39.3	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-50.43	2	-	46.83	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-57.82	2	0.7	40.14	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2487.808	-47.26	2	-	50	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2488.936	-57.15	2	0.7	40.81	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2500	-50.84	2	-	46.42	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2500	-57.95	2	0.7	40.01	Average	54	Pass

Note:

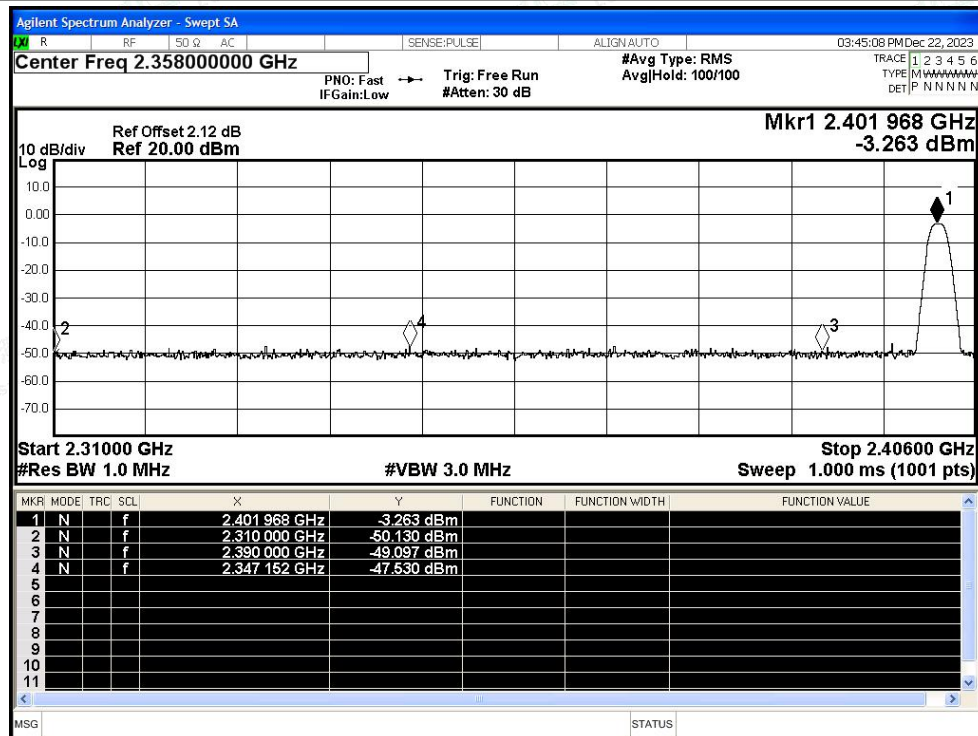
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



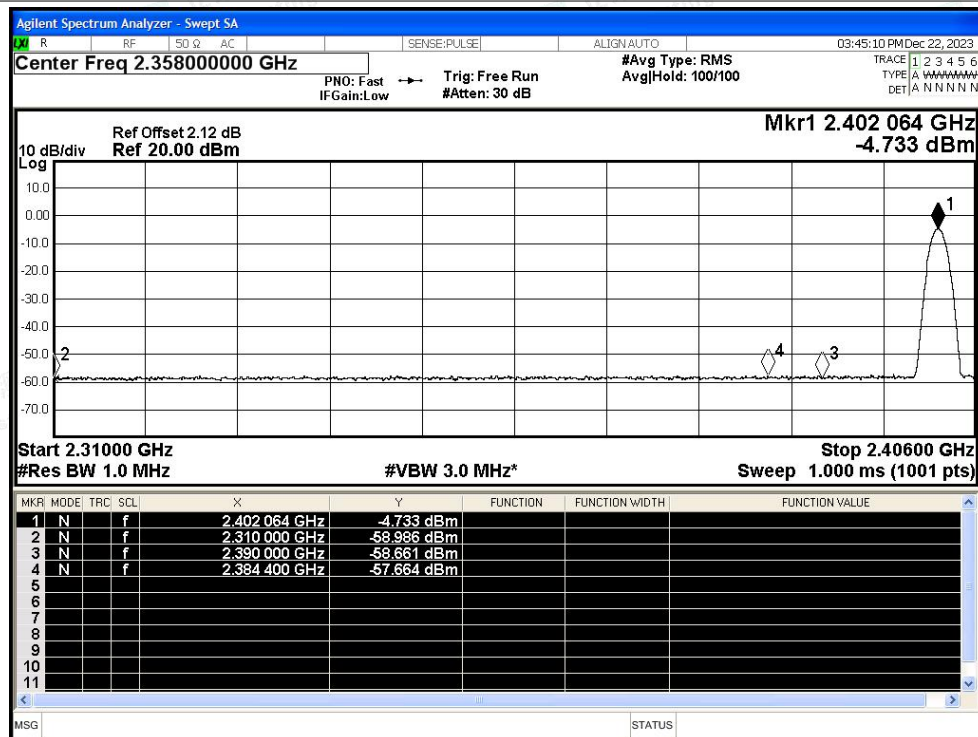


Test Graphs

Restrict Band NVNT BLE 1M 2402MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2402MHz Ant1 Average



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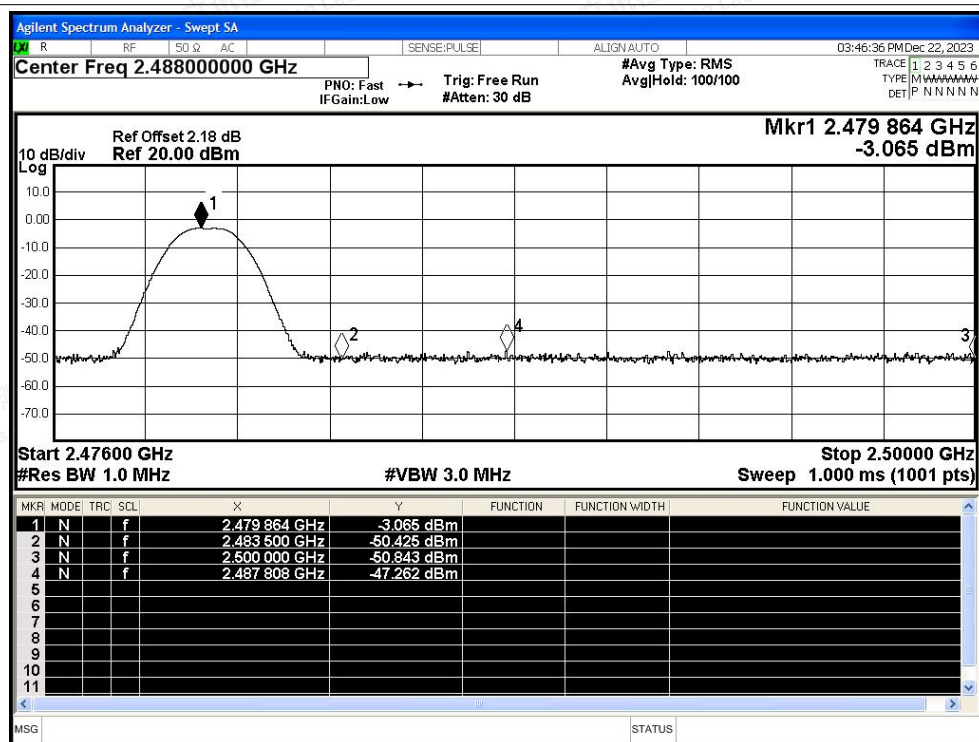
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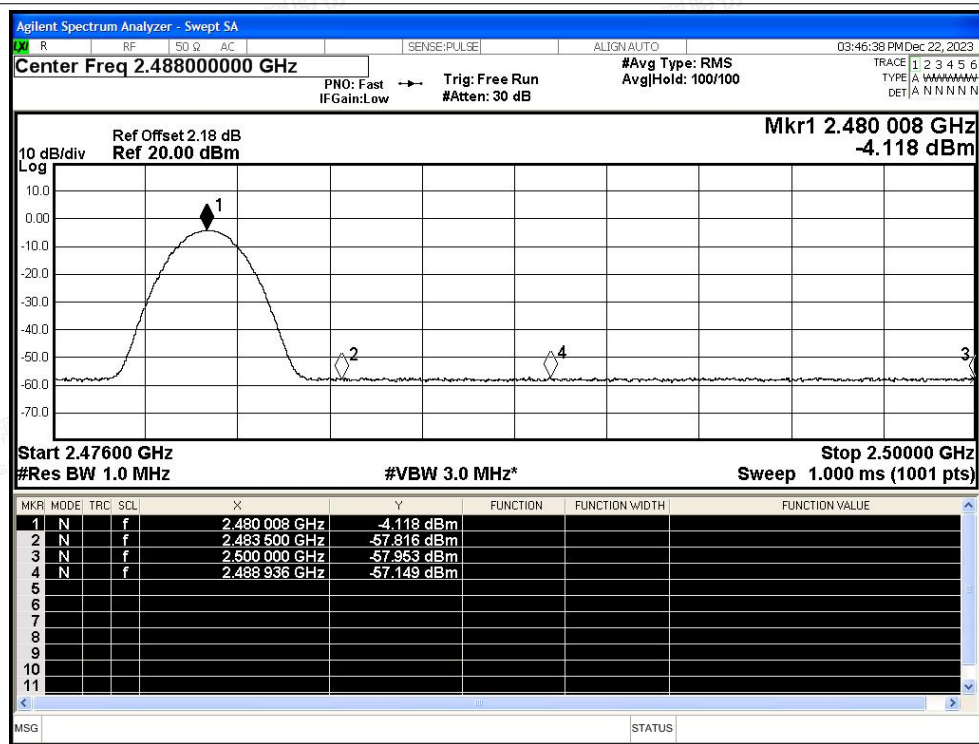
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Restrict Band NVNT BLE 1M 2480MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2480MHz Ant1 Average



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